

\* SWBAT define power and apply it to climbing stairs

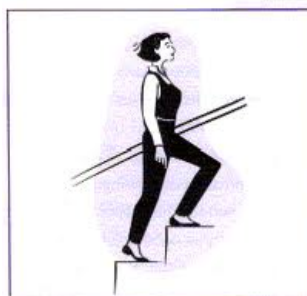
Sep 6-2:31 PM

# Welcome!!!

SECA Physics  
Thursday 19 November 2015

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- \* Pick up:
  - slip of paper (for later)
  - notebook



Opening Questions:

On your index card: write at least 2 meanings of the word "power".

Centering...

Sep 7-7:04 AM

Power

RESPECT

ENERGY

= LIGHTS ON/OFF

STRENGTH

MONEY

LOVE → INFLUENCE

SOCIAL STATUS

RULING

KING, PRES.

HEART-TOUCHING

MOVING

INSPIRATIONAL

POWER IS WORK OVER TIME.

$$P = \frac{W}{t}$$

Nov 30-10:05 AM

Force:

A PUSH OR PULL  
NEWTONS

Work:

WHEN A FORCE CAUSES A DISPLACEMENT.

1 N · m = 1 JOULES

$$W = F \cdot d$$

Power:

WORK OVER TIME 1 WATT =  $\frac{1J}{1s}$ 

$$\text{Power} = \frac{\text{WORK}}{\text{TIME}} = \frac{\text{FORCE} \times \text{DISTANCE}}{\text{TIME}}$$

Dec 2-7:51 AM

## Who has the most power???

- \* Partner up: Runner and Timer/recorder
- \* Only need to measure 4 things
- \* Rest is "plug and chug" -- fill in all the blanks

$$\text{WEIGHT in lbs} \times \frac{4.5\text{N}}{1\text{lb}} =$$

**WORK = FORCE x DISTANCE**

WEIGHT (N) → FORCE  
UP STAIRS → DISTANCE

$$\text{POWER} = \text{WORK} / \text{TIME TO WALK}$$

What'd we find???

Power walking

198.8 W

166.2 W

295.1 W

336.06 W

100-300 W

Dec 1-7:31 AM

## Daily 3 Questions

- \* Every day except test/project days
- \* 3 Questions on the topics of the day
- \* Main source of daily points
- \* I am happy to give credit when I have no concerns about someone giving or getting help with the answers.

You can't get your points if you don't have your **NAME!!!**

Name	Period
1.	
2.	
3.	

Sep 9-7:32 AM

1. Power is
  - A. a push or a pull
  - B. when a force causes a displacement
  - C. work over time
  
2. What was the general range of power results for our experiment?
  
3. Which is bigger 1 Watt or 1 horsepower?

Dec 2-7:55 AM